

DRAFT

A meeting of the New Hampshire Water Well Board was held on December 8, 2008 at 9:00 AM, in rooms 112 & 113, 29 Hazen Drive, Concord NH, 03302.

Present were: Jeffrey Tasker, Chairman

Rene Pelletier, Secretary

Board Members: Christopher Covell, Peter Caswell, David Wunsch, and
Stephen Smith

NHDES Staff: Richard Schofield and Allyson Gourley

Chairman Tasker brought the meeting to order at 9:03 AM.

Approval of Minutes

10/9/08 Meeting: Upon motion by Mr. Smith and seconded by Mr. Caswell, the Board unanimously voted to accept the Minutes of the meeting.

Geothermal Wells

DX Systems – Bill Wenzel

Bill Wenzel, the guest speaker on this subject was running late so the Board proceeded to the next item on the agenda.

Reporting

Mr. Schofield told the Board that DES recently issued a news release informing contractors about a new reporting requirement for commercial geothermal well systems. For projects involving 3 or more wells in excess of 1000 feet in depth, a description of the deepest borehole must be conducted by a licensed geologist and submitted to the NH Geological Survey. This requirement was mandated by statute.

Mr. Wunsch explained that the purpose of this requirement is to gather as much subsurface information as possible and take advantage of the data opportunity presented by these boreholes.

Other Issues

Mr. Schofield informed the Board that the Water Well Association will be inviting him and another member of the Board to one of their meetings in 2009 to discuss the new geothermal rules. Mr. Schofield went on to say that he has already received complaints regarding the grouting requirement. He has heard that some contractors are advising their customers, or the homeowners are figuring it out on their own, that they can install a drinking water well and then install a geothermal system later. By doing this they are able to avoid the grouting requirement and associated costs, approximately \$1,200 - \$1,500.

The Board discussed why the grouting requirement had been placed upon geothermal wells when it is not required of drinking water wells. Mr. Schofield said his explanation for the requirement was because of the hydraulic gradient that is created by the water being constantly pumped wears away the seal. He stated that was the rationale the Board used when they developed the grouting requirement.

Mr. Smith commented that he did not see why there would be a significant difference in seal wear between a geothermal well and a drinking water well.

Mr. Covell said that he believed the primary issue with regard to this matter was to prevent cross contamination between the over-burden aquifer and the bedrock aquifer.

Mr. Wunsch raised the concern that a well's purpose can be changed after it is drilled. For instance, an open loop system could become a closed loop system using refrigerants. He made the point that we want to promote the water well industry, and geothermal energy as a concept that we want to support, but this could make "MtBE look like a picnic" if we allow these refrigerants to go into the ground.

Mr. Pelletier informed the Board that there is a bill currently before the legislature that would require the medium used in geothermal systems to be under the jurisdiction of the Drinking Water and Groundwater Bureau. If this bill is passed, rules could be written to regulate these substances under the Safe Drinking Water Act.

Mr. Schofield reported on a related matter. He had received a telephone call from a well contractor who had been asked to construct a standing column well in Rye, NH. The contractor said he refused to take the job because the well would have penetrated saline water (deeper than 240'). He said he explained this issue to the contractor who indicated he still wanted to install the well. The contractor told him if he wouldn't install the well, he would find another water well contractor who would.

Mr. Schofield told the Board that he feels the state should not allow standing column wells in areas where saline water is a concern; only closed loop systems should be allowed under these circumstances.

Complaints

Previous Complaint - Sabin Guertin / Village Pump and Irrigation

This matter was continued from the last meeting. Mr. Schofield reported he had recently contacted Mr. Guertin to find out if Mr. Holland had made the agreed upon repairs to bring his wiring up to code. Mr. Guertin told Mr. Schofield that he did not want Mr. Holland at his house, so he was just "going to let it go".

Following some discussion, the Board decided that a letter should be sent to Mr. Guertin reiterating that the Board found no ethical violations, but recommends that the electrical wiring be brought up to code immediately. The Board closed the matter.

Licensing**Update On Previous Application**

Mr. Schofield reported on a letter the Board received from Jay Levesque of Forest Pump and Filter. Mr. Levesque had previously applied for a Rotary Drill license and at its last meeting the Board found that his application was deficient. The letter from Mr. Levesque explains why he feels he is qualified to take the license exam.

Mr. Schofield outlined the main points of the letter. Mr. Levesque writes that he has worked on a drill rig for 3 years. He states that he completed 1750 hours the first year; 1660 the second year; and 1100 hours the third year. He says he knows how to drill a well and would like the opportunity to answer any questions that the Board may have for him. Mr. Levesque explains that his greatest problem is the rule requiring an applicant to provide a reference from a former employer. Mr. Levesque owns the company and therefore has not worked for someone else. Three years ago he hired Albert Menter who is a licensed well contractor. Mr. Levesque has worked closely with Mr. Menter for the past three years. He realizes that he will need an exemption from this requirement. In his letter, Mr. Levesque questions whether it is the intent of the requirement to prevent someone like himself from obtaining a license.

The Board members discussed the question and collectively indicated that they did not believe that was the intent of the regulation.

Following further discussion, the Board agreed that an exemption appeared to be warranted in Mr. Levesque's case. They decided that if Mr. Levesque supplied two additional references, they would reconsider his application.

New Applicants

Mr. Schofield reported on one application for consideration. James Swalgen of American Generations Plumbing and Heating is applying for a Pump Installers License. Mr. Schofield noted that he is a licensed plumber in New Hampshire and Massachusetts.

Mr. Smith stated that he has a concern with granting plumbers a license when they have no experience specific to well pump installation. He asked Mr. Schofield where this subject was addressed in the rules.

Mr. Schofield provided some historical background on the Plumbers Exemption, RSA 482-B:7. He pointed out that the Plumbers Exemption does not appear to require licensed plumbers to have three years of "directly related" experience as specified by RSA 482-B:5, III. He said he thought that the legislative intent was premised on the belief that licensed plumbers obtain pump experience through their work.

Mr. Pelletier suggested that the Board request a legal opinion from the Attorney Generals Office.

The Board agreed. The Board also decided that if the Attorney General's Office determines that holding a plumber's license does exempt Mr. Swalgen from having "directly related" experience, then Mr. Swalgen should be allowed to sit for the Pump Installers Exam and does not need to come before the Board again for approval.

NHWWA Vote on Individual Licensing

Mr. Schofield reported that the New Hampshire Water Well Association ("NHWWA") discussed individual licensing at its last two meetings. He said that questionnaire ballots had been sent out in a recent newsletter. The members were asked to vote on whether they believed that individual pump installers should be required to be licensed. Thirteen members responded; four in favor and nine against. Mr. Schofield stated he attended the last Association meeting and explained to the membership that the issue recently considered by the Board was regarding the establishment of a voluntary licensing structure for individual drillers and installers.

In summary, Mr. Schofield said that it did not appear that the NHWWA would be opposed to voluntary licensing of individuals, but would not be in favor of a mandatory licensing requirement.

Break at 9:57 am.

Reconvene at 10:34 am.

DX Systems – Bill Wenzel

Chairman Tasker introduced Bill Wenzel. Mr. Wenzel told the Board that he has been installing geothermal systems for over 12 years. He said he has installed open loop, closed loop and DX systems. Mr. Wenzel showed the Board a distribution manifold from a DX system that his company installed in 2002. The system failed in 2008 due to a leak in the copper tubing. He circulated the manifold around the room so that everyone could see the crack where the copper tubes join the manifold. He said the manufacturer's instructions at the time called for 2" of sand around the loop. He said the recommended installation today calls for a foot of sand. This was a pit installation approximately 6 feet deep. Mr. Wenzel said the system failed in June and when he uncovered the manifold, it was frozen. He said he feels the system froze as a result of the heat exchange with the soil. He said these systems are installed with a "set point" that is supposed to shut the system off for a period of time so that this doesn't happen. He said he is aware of 3 or 4 of these systems which have failed. He went on to say that in his experience he did not feel it was a good installation given the soil types in NH. He also doubted that cathodic protection would preserve copper tubing indefinitely.

Mr. Wenzel said the manifolds come from the manufacturer with 1" copper tube extensions. The copper tubing is braised (or attached) in the field and then pressurized with Nitrogen to 400 lbs. He told the Board that the average system like this would contain approximately 25-30 lbs. of refrigerant. When the system fails all of the refrigerant is released. He said this represents 4 to 5 times the amount of refrigerant that would be used in a conventional heat pump.

Brandon Kernen of the NHDES stated that there is currently no requirement that failures like this be reported, but there is legislation currently under review that would give DES rule making authority.

Mr. Smith asked about remediation after a system like this fails. Mr. Wenzel said that the older systems contain Freon R22, which to his knowledge would volatilize leaving only lubricant oils in the ground. He said the newer systems today use 407C which he is not familiar with.

Mr. Wenzel stated that he knows many of the borehole systems being installed are not being grouted.

Dave Wunsch questioned whether these systems should be required to obtain approval from an engineer, such as an underground storage tank.

Mr. Schofield commented that he feels contractors installing DX systems should be required to be licensed.

Old Business

Request for Exemption of We 603.03 – Robert Silva

Mr. Schofield reported on this matter which was continued from the previous meeting. Robert Silva had his well pump replaced recently and was notified by the pump installer that he needed to apply for an exemption because his well head is located below grade and in order to vent the well would require core drilling through the home and deck. At the last meeting, the Board decided it could not take action on the matter until pictures of the well were submitted.

Mr. Schofield had received photographs from Mr. Silva for the Board to review. The pictures showed a carpeted landing at the bottom of a stairway and adjacent to an exterior door. The well, presumably located under the landing, is not visible.

Following some discussion, Mr. Covell made a motion that the exemption be granted. The motion was seconded by Mr. Wunsch.

Mr. Pelletier suggested that the motion be amended to include a letter to Mr. Silva stating that the exemption is granted premised on his assurance that all necessary steps have been taken to prevent contamination of the well.

The Board voted unanimously to approve the motion as amended.

Adopted Rules Update

Mr. Schofield reported on the status of getting the new rules printed. At the last meeting the Board voted to order 250 copies at a total cost of \$755.14. Since then, an Executive Order has been issued declaring that no general fund money be spent without a waiver. Mr. Schofield told the Board that he is circulating an internal requisition through the system which has been signed

off by Sarah Pillsbury and Rene Pelletier. He said the requisition is currently being reviewed by Sue Carlson. She called him to discuss the binding because “heat binding” is relatively expensive. He agreed to a less expensive binding, but as of this time has not heard back from her.

Other Issues

Mr. Schofield told the Board that it was brought to his attention today that the link to the new rules at the Water Well Board Website is not working correctly. The URL brings you to the Wetlands Bureau Rules. He said he knows it was working correctly last week. The rules have been moved in the database from “proposed rules” to “certified rules”. This may be the source of the problem because the URL still takes you to the proposed rule section.

Mr. Wunsch presented information brought to his attention through the Joint Board of Licensure regarding an Advisory Opinion that had recently been issued by the State of NH Executive Branch Ethics Committee. He felt this was an issue the Board members should be aware of because it pertained to individuals who are members of an executive branch licensing board or commission. Mr. Wunsch said the Advisory Opinion states that members of such a board or commission, which would include the Water Well Board, are prohibited from using their position on the board in advertising for their personal business.

Mr. Schofield commented on another matter discussed earlier in the meeting regarding the Plumbers Exemption. He suggested to the Board that applicants for a pump installer license that do not possess 3 years of directly related experience should be required to obtain some electrical training such as an electrical short course for pump installations. He said as a regulatory body, this is an issue that the Water Well Board needs to be concerned about. He added that the Board may also want to consider requiring an electrical short course for all pump installers.

Mr. Pelletier suggested that if Counsel upholds the plumber’s exemption, maybe the Board should leave it as an “exemption” and not issue a pump installers license. He said this is a very unique situation where someone would be exempt, and then be granted a license.

Mr. Schofield stated that 62% of licensed pump installers are plumbers. All of them were able to obtain a pump installers license as a result of the exemption.

New Business

Webpage – Proposed Updates

Mr. Schofield told the Board that he met with the individuals responsible for maintaining the website. He has requested some changes to the current format. The intent of the proposed modification is to arrange information on the website in a more logical, user friendly manner. He asked that the Agenda, Meeting Schedule and Minutes be moved from the “Rules and Regulatory” section to the “Hot Topics” section, since this information is current and always changing. He told the Board that if they approve of his recommended changes, then the changes will be implemented.

Mr. Pelletier said he approved of the recommended changes and the Board members agreed.

2009 Meeting Schedule

Mr. Schofield provided the Board Members with the WWB Meeting schedule for 2009.

Other Issues

Mr. Schofield requested a declaratory ruling from the Board regarding We 602.05 (k) Special methods of construction shall include but not limited to:

- (1) Installing no less than 40 feet of casing into competent bedrock where bedrock is less than 20 feet from the ground surface; and
- (2) Grouting the casing.

Mr. Schofield told the Board that the reason for his question is because he has received reports for 12 wells that have been installed (less than 20 feet to bedrock) and they all were installed with 40 feet of casing. He said his interpretation of the rule is that 40 feet of the casing must be in bedrock; in other words if bedrock is encountered at 19 feet, the well would require 60 feet of casing.

Following considerable discussion, the membership agreed that the intent of the rule was that there should be at least 40 feet of casing in these situations; not to require more than 40 feet.

Mr. Schofield thought the amended version of the rule, which included the words “competent bedrock” resulted in the confusion.

It was suggested by Mr. Caswell that the program clarify this issue in the next newsletter.

The meeting was adjourned at 11:50 am.